

**Listing of the Claims:**

The following is a complete listing of all the claims in the application, with an indication of the status of each

- 1           1. (Currently amended) A wavelength division multiplexing  
2           transmission system in which a plurality of remote apparatuses are  
3           connected to a station apparatus which communicates with said remote  
4           apparatuses using a given plurality of wavelengths, wherein each of  
5           said remote apparatuses comprises:  
6                 wavelength selecting means which selects a wavelength;  
7                 wavelength separating means which separates an optical signal of a  
8                 selected wavelength from an optical signal including a plurality of  
9                 wavelengths for separating an optical signal including a plurality of  
10                wavelengths into separated optical signals;  
11                signal output means which outputs a reception status signal  
12                indicating whether or not a separated optical signal is received from the  
13                wavelength separating means;  
14                ~~optical receiving means for receiving said separated optical signals~~  
15                ~~from said wavelength separating means and for outputting reception~~  
16                ~~status signal indicating whether or not each of the given plurality of~~  
17                ~~wavelengths used in the transmission system is being received;~~  
18                wavelength control means which determines whether the selected  
19                wavelength is a used wavelength or an unused wavelength on the basis of  
20                the reception status signal, and controls the wavelength selecting means  
21                until the unused wavelength is selected by the wavelength selecting means  
22                for determining an available wavelength as a transmission and reception  
23                signal on the basis of said reception status signal; and  
24                optical transmitting means which transmits for transmitting an  
25                optical signal of the unused said available wavelength determined by said  
26                wavelength control means.

1     2. (Currently amended) The wavelength division multiplexing  
2     transmission system according to claim 1, wherein said wavelength control  
3     means sets the unused said-available wavelength as a transmission and  
4     reception signal and outputs a wavelength control signal for setting the  
5     unused said-available wavelength.

1     3. (Currently amended) The wavelength division multiplexing  
2     transmission system according to claim 1, wherein the said wavelength  
3     control means determines a the wavelength of an unreceived optical signal  
4     as the unused among the wavelengths used in the transmission system as  
5     said the available wavelength and sets the unused said-available  
6     wavelength as a transmission and reception wavelength to be used in the  
7     said remote apparatus.

1     4. (Currently amended) The wavelength division multiplexing  
2     transmission system according to claim 1, wherein the said wavelength  
3     control means determines a the wavelength of a received optical signal as  
4     the unused said-available wavelength and sets the unused said-available  
5     wavelength as a transmission and reception wavelength signal to be used  
6     in the said-remote apparatus.

1     5. (Currently amended) The wavelength division multiplexing  
2     transmission system according to claim 1, wherein the said-station  
3     apparatus comprises optical control means which determines for  
4     determining a wavelength to be used, on the basis of an optical signal  
5     received from said the remote apparatus.

1 6. (Currently amended) The wavelength division multiplexing  
2 transmission system according to claim 1, wherein the said station  
3 apparatus is arranged to prevent an optical signal having the same  
4 wavelength as an unreceived wavelength ~~among wavelengths used in said~~  
5 ~~transmission system~~ from being outputted and outputs an optical signal  
6 having the same wavelength as a received wavelength.

1 7. (Currently amended) The wavelength division multiplexing  
2 transmission system according to claim 1, wherein the said station  
3 apparatus ~~comprising comprises~~:  
4 wavelength demultiplexing means which demultiplexes a for  
5 ~~demultiplexing the wavelength of~~ a received optical signal;  
6 optical receiving means which receives for receiving an optical signal  
7 demultiplexed by the said wavelength demultiplexing means;  
8 optical output control means which determines for determining, as a  
9 transmission wavelength, an optical signal having the same wavelength as  
10 that of an optical signal received by the said optical receiving means;  
11 optical transmitting means which transmits for transmitting an  
12 optical signal having the transmission wavelength determined by the said  
13 optical output control means; and  
14 wavelength multiplexing means which multiplexes for multiplexing  
15 the wavelength of the optical signal transmitted by the said optical  
16 transmitting means.

1 8. (Currently amended) The wavelength division multiplexing  
2 transmission system according to claim 1, wherein each of the said remote  
3 apparatuses and the said station apparatus are connected with each other  
4 through optical branching and coupling means.

1 9. (Currently amended) The wavelength division multiplexing  
2 transmission system according to claim 8, wherein the said optical  
3 branching and coupling means is an optical coupler.

1 10. (Currently amended) The wavelength division multiplexing  
2 transmission system according to claim 8, wherein the said optical  
3 branching and coupling means is a wavelength demultiplexing and  
4 multiplexing means.

1 11. (Currently amended) The wavelength division multiplexing  
2 transmission system according to claim 1, wherein the said plurality of  
3 remote apparatuses and the said station apparatus are connected in a star  
4 topology.

1 12. (Currently amended) The wavelength division multiplexing  
2 transmission system according to claim 1, wherein the said plurality of  
3 remote apparatuses and the said station apparatus are connected in a tree  
4 topology.

1 13. (Currently Amended) A remote apparatus in a wavelength division  
2 multiplexing transmission system in which a plurality of remote  
3 apparatuses are connected to a station apparatus and communication is  
4 performed among said the remote apparatuses and the station apparatus  
5 using a given plurality of wavelengths, said remote apparatus comprising:  
6 wavelength selecting means which selects a wavelength;  
7 wavelength separating means which separates for separating an  
8 optical signal of a selected wavelength from an optical signal including a  
9 plurality of wavelengths ~~into separated optical signals;~~

10 signal output means which outputs a reception status signal  
11 indicating whether or not the separated optical signal is received from the  
12 wavelength separating means;

13 optical receiving means for generating and outputting a reception  
14 status signal indicating whether or not each of the given plurality of  
15 wavelengths used in the transmission system is being received;

16 wavelength control means which determines whether the selected  
17 wavelength is a used wavelength or an unused wavelength on the basis of  
18 the reception status signal, and controls the wavelength selecting means  
19 until the unused wavelength is selected by the wavelength selecting means  
20 for determining an available wavelength as a transmission and reception  
21 signal on the basis of said reception status an optical signal; and

22 optical transmitting means which transmits for transmitting an  
23 optical signal of the unused wavelength determined by the said available  
24 wavelength determined by said wavelength control means.

1 14. (Currently amended) The remote apparatus according to claim 13,  
2 wherein the said wavelength control means sets the unused said available  
3 wavelength as a transmission and reception signals and generates and  
4 outputs a wavelength control signal for setting the unused said available  
5 wavelength.

1 15. (Currently amended) The remote apparatus according to claim 13,  
2 wherein the said wavelength control means determines the wavelength of  
3 an unreceived optical signal as the unused among the wavelengths used in  
4 the transmission system as said available wavelength and sets the unused  
5 said available wavelength as a transmission and reception wavelength.

1 16. (Currently amended) The remote apparatus according to claim 13,  
2 wherein the said-wavelength control means determines the wavelength of

3 a received optical signal as the unused ~~said available~~ wavelength and sets  
4 the unused ~~said available~~ wavelength as a transmission and reception  
5 wavelength.

17 -19. (Canceled).

1 20. (currently amended) A method for adding a remote apparatus to a  
2 wavelength division multiplexing transmission system in which a plurality  
3 of remote apparatuses are connected to ~~a~~ the station apparatus and  
4 communication is performed among the ~~said~~ remote apparatuses and the  
5 station apparatus using a given plurality of wavelengths, said method  
6 comprising:

7 selecting a wavelength;

8 separating an optical signal of a selected wavelength from an optical  
9 signal including a plurality of wavelengths ~~into separated optical signals;~~  
10 ~~generating and~~ outputting a reception status signal indicating  
11 whether or not a separated optical signal is ~~wavelengths used in the~~  
12 ~~transmission system are being~~ received;

13 determining whether the selected ~~an available~~ wavelength is a used  
14 wavelength or an unused wavelength on the basis of said reception status  
15 signal;

16 controlling the wavelength selecting means until the unused  
17 wavelength is selected by the selecting step; and

18 transmitting an optical signal of the unused wavelength determined  
19 by the determining step ~~said available~~.

1 21. (Currently amended) The method according claim 20, further  
2 comprising:

3           generating and outputting, based on a result of the said-determining  
4     step, a wavelength control signal for setting the unused said available  
5     wavelength; and  
6           setting, based on the said wavelength control signal, the unused  
7     said available wavelength as a transmission and reception signal.